☐ Firefighting

- Exterior water spray — 46 CFR 154.1105
  - Areas protected — 46 CFR 154.1110
  - Discharge — 46 CFR 154.1115
  - Nozzles — 46 CFR 154.1120
  - Pipes, fittings, and valves — 46 CFR 154.1125
  - Pumps — 46 CFR 154.1135
    - Witnessed simultaneous operation of deck spray and firemain systems
- Dry chemical — 46 CFR 154.1145

  Cargo capacity < 1,000 cubic meters (35,300 cubic feet)—at least 1 self-contained unit

  Cargo capacity ≥ 1,000 cubic meters (35,300 cubic feet)—at least 2 self-contained units
  - Date last serviced _____
  - Distribution — 46 CFR 154.1150
    - Cargo areas and pipelines
      - At least 2 hand hose lines OR
      - At least 1 hand hose line and 1 monitor
    - After end of cargo areas
      - At least 1 storage unit AND
      - Hand hose line or monitor
    - Each cargo manifold
      - At least 1 monitor
  - Controls — 46 CFR 154.1165
    - Local for hand hose line and monitor
    - Remote for cargo manifold monitor

☐ Cargo area mechanical ventilation — 46 CFR 154.1200

- Fixed exhaust systems where required
  - Exhaust system ducts where required — 46 CFR 154.1205
  - Location of exhaust ducts
- Fixed supply systems where required
- Operational controls outside the ventilated space
- Electric ventilation motor location
- Ventilation impeller and housing materials
- Protective metal screen

Notes: _____

☐ Liquid level gauging

Open — 46 CFR 154.1305

Restricted

Closed
- Date last calibrated and tested _____
- Maximum operating pressure _____

- Closed gauge shutoff valve — 46 CFR 154.1310
- Restricted gauge excess flow valve — 46 CFR 154.1315
- High liquid level alarm system — 46 CFR 154.1325
  - Independent of gauging system
  - Set below 100% liquid full
  - Activates audible and visual alarms upon activation of quick-closing valves
  - Witness operational tests

☐ P/V protection — 46 CFR 154.1335

- At least 1 high pressure sensor
  - Actuates below tank MARVS
  - Actuates audible and visual alarms at cargo control station and remote group alarm in wheelhouse
  - Witness operational test
- At least 1 low pressure sensor
  - Actuates audible and visual alarms at cargo control station and remote group alarm in wheelhouse
  - Witness operational test
- Manifold pressure gauge fitted where required

☐ Temperature measuring devices — 46 CFR 154.1340

- Bottom and maximum liquid level locations
- Cargo control station readouts
  - Audible and visual alarms in cargo control room and wheelhouse
  - Witness operational test

Notes: _____

☐ Cargo vent systems

- Pressure relief systems — 46 CFR 154.801
  - Tank volume ≤ 20 cubic meters and has at least one pressure relief valve
  - Tank volume > 20 cubic meters and had at least two pressure relief valves of same capacity
  - – Tank MARVS _____
  - – Relief valve setting(s) less than tank MARVS
  - – Date last tested _____
  - – Properly sealed
  - – No stop valves unless interlocked
- Vacuum protection (method for testing either of the following) — 46 CFR 154.804
  - – 2 independent pressure switches
    - 1 to operate audible and visual alarms set at 80% in cargo control room and in wheelhouse
    - 1 to automatically shut off liquid or vapor suction
  - – Vacuum relief valve
    - Adequate gas flow capacity
    - Set to open
    - Admits inert gas, vapor, or air
- Vent masts — 46 CFR 154.805
  - – Discharge vertically upward
  - – Proper weather hood
  - – Proper screen (last serviced / replaced____)
  - – Height above weather deck_____ (> B/3 or 6 meters / 19.7 feet)
  - – Height above working level _____ (6 meters /19.7 feet)
    - Adequate distance from air takes to accommodation and other gas-free spaces > 10 meters

Notes: _____

☐ Safety equipment — 46 CFR 154.1400

- Required safety equipment based on cargo capacity (see the following table)
  - Vessel's cargo capacity is < 25,000 cubic meters — 46 CFR 154.1400(a)
  - Vessel's cargo capacity is ≥ 25,000 cubic meters — 46 CFR 154.1400(b)
- Respiratory equipment — 46 CFR 154.1405
  - – Additional required equipment on board
- Decontamination shower — 46 CFR 154.1410
  - – Shower and eye wash on weatherdeck
  - – Properly marked
- Equipment locker
  - – Required equipment stowed — 46 CFR 154.1430

Equipment	Amount Required for Specific Cargo Capacities		
	< 25,000 cubic meters	≥ 25,000 cubic meters	Table 4 (special requirements)
30-minute SCBA	6	8	3
SCBA spare bottles	9	9	9
Steel-cored lifeline	6	8	3
Explosion-proof flashlight	6	8	3
Fire axes	3	3	0
Helmets	6	8	3
Boots and gloves	6	8	3
Goggles	6	8	3
Heat-resistant outfits	3	5	0
Chemical-protective outfits	3	3	3

Notes: _____

Bulk Liquefied Gases:

NOTE: *Vessels carrying bulk liquefied gases must meet the requirements of 46 CFR Part 154.*

☐ Cargo piping — 46 CFR 154.310

- Connections

☐ Pump and compressor rooms — 46 CFR 154.315

- If prime mover is in adjacent space
  - Bulkhead / deck is gas tight
  - Positive pressure seal(s)

☐ Control stations — 46 CFR 154.320

- Above weather deck
- Gas-safe
- Instrumentation

☐ Openings — 46 CFR 154.330

- Distance from athwartships bulkhead > 10 feet
- Fixed port lights
- Gaskets on wheelhouse doors and windows
- Air intakes

☐ Air locks — 46 CFR 154.345

- Two steel, self-closing doors, with no hold-open devices
- Audible / and visual alarms
- Mechanically ventilated from a gas-safe place
- Air pressure in air lock is > gas-dangerous space, but < gas-safe space
- Vapor leak monitor
- Automatic power cut-off in gas-safe space
- Witnessed operational tests

☐ Liquid pressure relief — 46 CFR 154.517

- Date last tested and certified _____
- Piping relief valves discharge — 46 CFR 154.519
  - Cargo tank
  - Vent mast
  - Suction (if on cargo pump)

Notes: _____

☐ Drains fitted in low points of system

☐ Piping electronically bonded to hull and electrically continuous

☐ VCS able to be isolated from IGS with isolation valve

☐ Cargo tank venting able to be isolated from VCS

☐ Manual isolation valve at each vessel vapor connection

- Position of isolation valve verified by:
  - Markings
    OR
  - Position of stem

☐ Last meter of piping before connection

- Painted red / yellow / red
- Labeled “vapor”

☐ Vapor connections

- Stud 0.5 X 1.0 inches at 12 o’clock position on the flange in line with bolt pattern

☐ Vapor hoses

- Annually hydrostatically tested to 1.5 X MAWP (also vapor collection arm)
- Design burst pressure of 25 psig
- MAWP of 5 psig
- Capable of withstanding 2 psig vacuum without collapsing or constriction
- Electrically continuous with a maximum resistance of 10,000 ohms
- Resistant to abrasion and kinking
- Last meter of painted red / yellow / red and labeled “vapor”

☐ Saddles available for support of VCS hoses

Notes: _____

☐ Temperature control systems — 46 CFR 153.430

- Standby cooling system — 46 CFR 153.432
- Refrigerated cargo tanks
  - Alarms — 46 CFR 153.438
    - Pressure
    - Temperature
  - Witness operation
- Fluid compatibility with cargo — 46 CFR 153.436
- Remote temperature sensors — 46 CFR 153.440

☐ Flammable or combustible cargoes

- Weatherdeck fire protection system — 46 CFR 153.460
- Electrical bonding of independent tanks — 46 CFR 153.461
- Vent discharge 10 meters from ignition source — 46 CFR 153.463
- Vapor detector — 46 CFR 153.465
  - 1 fixed
  - 1 portable
  - Witnessed calibration

☐ Emergency equipment

- Personnel emergency and safety equipment — 46 CFR 153.214
  - Two stretchers or wire baskets
  - Self-contained breathing apparatus (SCBA) with 5 refill tanks; date professionally serviced _____ — BCH/3.16.8 & IBC/14.2.6
  - Overalls
  - Boots
  - Long-sleeve gloves
  - Goggles
  - Steel-cored lifeline with harness
  - Explosion-proof lamp
  - First aid equipment
  - Inspected every 30 days — BCH/3.16.8 & IBC/14.2.6
- Safety equipment lockers — 46 CFR 153.215
  - Minimum of two
  - Accessible
  - Markings
- Shower and eyewash fountains — 46 CFR 153.216

Notes: _____

Vapor Overpressure and Vacuum Protection:

NOTE: *Requirements for vapor overpressure and vacuum protection are detailed in 46 CFR 39.20-11.*

☐ VCS system designed to discharge cargo vapor at 1.25 times the maximum transfer rate

☐ Design pressure verified

- Spill valves, rupture disks, working vapor pressure set below maximum design pressure of VCS

☐ Maximum design vacuum pressure verified

☐ P/V valves settings verified

- Pressure and vacuum annually pressure tested
- Do not relieve at a pressure < 1.0 psig
- Do not relieve at a vacuum < -0.5 psig
- All P/V valves meet regulations or API 2000 standard — 46 CFR 162.017
- A means to check the seating of the P/V valve if installed after 23 JUL 91

High and Low Vapor Pressure Protection:

NOTE: *Requirements for high and low vapor protection are detailed in 46 CFR 39.20-13.*

☐ Pressure sensing devices located in main vapor collection line

- Tested to show accurate within 10% of the actual pressure

☐ Pressure indicator located at the cargo control station

☐ High pressure alarm

- Audible and visual alarms where cargo transfer is controlled
- Activates no higher than 90% of the highest P/V valve vacuum setting

Notes: _____

☐ Tank venting

- Safety relief valves only
- Type
  - B/3 vents — 46 CFR 153.350
  - 4m vent — 46 CFR 153.351
  - High-velocity vents — 46 CFR 153.353
- B/3 and 4m outlets — 46 CFR 153.352
  - Vertical discharge
  - Prevent precipitation from entering
- No restrictions — 46 CFR 153.360
- System drains — 46 CFR 153.362
- Pressure vacuum valves — 46 CFR 153.355
  - Location
  - Requirements — 46 CFR 153.368
  - Set pressures > .5 psi
  - Date last tested _____
- Liquid overpressurization — 46 CFR 153.365
  - Control system meets 46 CFR 154.408
    - Yes
    - No
  - Spill valve meets ASTM F-1271
    - Yes
    - No
- Special requirements — 46 CFR 153.372

☐ External examination of inert gas system — 46 CFR 32.53 MSM Vol. II Ch. 15

- Piping and components
- Scrubber
- Fans
- Valves
- Expansion joints
- Free of corrosion or leakage

Notes: _____

☐ Oil transfer procedures properly amended — 33 CFR 155.750(a)

- Line diagram of VCS piping
  - Valves
  - Control devices
  - P/V valves
  - Pressure indicators
  - Flame arrestors (if fitted)
  - Detonation arrestors (if fitted)
  - Spill valves (if fitted)
  - Rupture disks (if fitted)
- Maximum allowable transfer rate _____
- Initial transfer rates for each tank _____
- Tables or graphs and VCS pressure drops
- Relief settings
  - Spill valves _____
  - Rupture disks _____
  - P/V valves _____
- Description of and procedures for operating VCS
  - Pre-transfer equipment inspection requirements
  - Vapor line connection
  - Closed gauging system
  - High-level alarm system
  - Independent automatic shutdown system (if fitted)

Cargo Boil-off Used As Fuel:

☐ General — 46 CFR 154.705

- Inert gas connection
- Fuel flow maintained when gas supply is cut off — 46 CFR 154.1854

Notes: _____

Section 4: Cargo Operations for Chemical / Gas Carriers

Bulk Liquid, Liquefied Gas, or Compressed Gas Hazardous Materials:

NOTE: *If vessel carries cargo listed in 46 CFR Part 154, use the requirements under "Bulk Liquefied Gases" at the end of this section.*

☐ Containment

- Type
  - I — 46 CFR 153.230
  - II — 46 CFR 153.231
  - III — 46 CFR 153.232
- Separation of cargo tanks / other spaces — 46 CFR 153.233
- Piping location restriction exemptions — 46 CFR 153.235
- Materials
  - – Prohibited — 46 CFR 153.236
  - – Required — 46 CFR 153.238
  - – Cast iron — 46 CFR 153.239

☐ Tanks

- Double bottom or deep tanks — 46 CFR 153.250
- Independent tanks — 46 CFR 153.251
- Access — 46 CFR 153.252
- Trunks, domes, and openings — 46 CFR 153.254
- Linings — 46 CFR 153.256, 46 CFR 153.266

☐ Piping

- Design — 46 CFR 153.280
- Independent tanks — 46 CFR 153.281
- Filling lines — 46 CFR 153.282
- Separation — 46 CFR 153.292
- Marking — 46 CFR 153.294

Notes: _____

Section 6: Drills

◇ **Fire Drill:**

Initial notifications	Familiarity with duties	Space isolation
General alarms / signals	Familiarity with equipment	Smoke control
Crew response	Fire pumps started	Communications w/ bridge
Properly dressed / equipped	Two jets of water	
Language understood by crew	Fire doors and dampers	

(SOLAS 74/78 III/18.3; MSM Vol. II/22.C.7.i; NVIC 6-91)

Location: _____ Time on Scene: _____

Notes: _____

☐ Marine sanitation device

- Type (I, II, or III) — 33 CFR 159.7
- Nameplate — 33 CFR 159.55
- Placard — 33 CFR 159.59

Machinery Spaces:

☐ Main and auxiliary machinery installations

- General housekeeping — SOLAS 74/78 I/11(a)
- Fire hazards
- Shock and electrical hazards — SOLAS 74/78 II-1/45.1
- Personnel hazards (moving parts not protected, hot surfaces, etc.) — SOLAS 74/78 II-1/26
  - Leaking fuel oil piping or fittings
  - Sea chests, sea valves / spool pieces in good condition
- Tank tops and bilges free of oil — SOLAS 74/78 II-2/15
- Watertight doors — SOLAS 74/78 II-1/23
  - Hand / power operation
  - Local / remote control
  - Alarm

☐ Steering gear machinery — SOLAS 74/78 II-1/29

- Linkages
- Hydraulic leaks
- Ram guides
- Lubrication

◇ Operationally test main and auxiliary steering gear — SOLAS 74/78 II-1/29.15 through 29.20

- 28-second operation
- Systems operate independently
- Unusual vibrations / leaks
- Ram hunting
- Limit switches
- Communications with bridge
- Steering gear instructions (block diagram)

Notes: _____

Section 7: Expanded Examination Items

Manuals and Instructions:

○ Check for presence (in appropriate language) of the following documents

- Instructions for maintenance and operation of all installations / equipment for fighting and containing a fire — SOLAS 74/78 II-2/20
- Training manual for lifesaving appliances — SOLAS 74/78 III/18.2, SOLAS 74/78 III/51
- Instructions for onboard maintenance of lifesaving appliances — SOLAS 74/78 III/19.3, SOLAS 74/78 III/52
- Stability booklet, associated stability plans and information — SOLAS 74/78 II-1/22, ICLL 66 Reg. 10

○ Cargo gear certificate

○ Human Factors — STCW Code

- Determine if the appropriate crew members are able to understand the information given in manuals, instructions, etc., relevant to the safe condition of the ship and its equipment, and that they are aware of the requirements for maintenance, periodical testing, training, drills, and recording of logbook entries.

Safety Management System (SMS):

NOTE: *Requirements and guidance for inspecting vessel Safety Management Systems are detailed in SOLAS 74/78, Chapter IX and NVIC 4-98.*

○ Documentation (may be in the form of a Safety Management Manual)

- Controlled documents
- Safety and Environmental policy
- Master of vessel familiar with SMS
- Language understood by crew
- Documentation identifies:
  - Written procedures kept on board vessel
  - Essential or critical equipment identified (or a separate manual containing this information)
  - Procedures for reporting non-conformities
  - Company's designated person(s) (name or title, and address)

Notes: _____

Fire Protection:

☐ Fire control plan — SOLAS 74/78 II-2/20

- Permanently exhibited
- Language of flag state
- Copy permanently stored in weathertight container outside deckhouse

☐ Fire doors (spot-check) — SOLAS 74/78 II-2/46, SOLAS 74/78 II-2/47

- Machinery space and stair towers
- Not tied or blocked open
- Installed closure devices working

☐ Fire detection systems (spot-check)

- Smoke / fire alarms — SOLAS 74/78 II-2/13
- Remote pull stations — SOLAS 74/78 II-2/11.8
- Smoke / flame / heat detectors and sensors — SOLAS 74/78 II-2/53

☐ International shore connection — SOLAS 74/78 II-2/19

☐ Means of escape from accommodation, machinery, and other spaces — SOLAS 74/78 II-2/45

- Two required (some exceptions)
- Dead end corridors

☐ Portable fire extinguishers (spot-check)

- Good condition / available for immediate use — SOLAS 74/78 II-2/21
- Located on stations
- Serviced at periodic intervals — SOLAS 74/78 II-2/6.5

◇ Test operation of fire main system

- Required number of fire pumps — SOLAS 74/78 II-2/3
- Location of pumps — SOLAS 74/78 II-2/4
- Pumps, hydrants, piping, hoses, and nozzles in good condition and available for immediate use — SOLAS 74/78 II-2/21

Notes: _____

○ Audits

- Internal audits conducted as specified by SMS
  NOTE: *Do NOT examine internal audit records.*
- External audit results reviewed
  - Status of open non-conformities relevant to deficiencies leading to detention
  - Status of implementation of corrective and preventative measure

○ SMS review conducted by Master in accordance with procedures in SMS

- Non-conformities identified
- Report of non-conformity prepared and sent in accordance with procedures established by SMS

Navigation Safety:

○ Test navigation equipment listed in Section 3 to the extent necessary to determine if equipment is operating properly.

○ Human Factors (spot-check): determine if deck officers are familiar with the following items: — STCW Table A-II, NVIC 3-98

- Operation of bridge control and navigational equipment
- Use of nautical publications and charts
- Ship maneuvering characteristics
- Lifesaving signals
- Bridge procedures, instructions, manuals, etc.
- Changing steering from automatic to manual and vice versa
- Preparations for arrival and departure
- Communications with engineroom
- Use of VHF
- Raising the alarm
- Abandon ship drill and fire drill

Notes: _____

Lifesaving Equipment:

☐ Lifeboats / rescue boats

- Required number — SOLAS 74/78 III/26
- Hull integrity and fittings — SOLAS 74/78 III/19.2
- Engine starts

Stbd Lifeboat	Port Lifeboat	Lifeboats
Engine equipped	Engine equipped	Wooden
Engine tested	Engine tested	Fiberglass
Lifeboat lowered	Lifeboat lowered	Steel
		Covered
Free fall lifeboat with rescue boat		

☐ Davit system — SOLAS 74/78 III/19.2, SOLAS 74/78 III/48

- Structure and foundation
- Roller tracks
- Lubrication (evidence of use)
- Falls; end for end / renew (2.5 / 5 years)
- No obstructions to lowering

☐ Embarkation area — SOLAS 74/78 III/11.7

- No obstructions
- Embarkation ladder — SOLAS 74/78 III/9
- Launching instructions
- Emergency lighting

Notes: _____

○ Emergency communication equipment

- 2-way VHF radiotelephone apparatus — SOLAS 74/78 III/6.2
- Radar transponders
- Survival craft EPIRBs
- Onboard communication and alarm system — SOLAS 74/78 III/6.4

○ Line-throwing appliance — SOLAS 74/78 III/17.49

- Specifications and equipment

○ Pilot ladders and hoists in good condition — SOLAS 74/78 V/17

○ Distress signals — SOLAS 74/78 III/6.3

- 12 red rocket parachute flares

Fire Protection:

○ Structural fire protection — SOLAS 74/78 II-2/42, 43, 44, 46, 47, 49, & 50

- Bulkheads and decks meet applicable fire integrity requirements
- Openings (e.g., doors, ductwork, electrical wires, piping, etc.) constructed so that they do not destroy fire resistance of bulkheads
- Manual and automatic fire doors examined / tested

○ Fire detection, fire alarm, and automatic sprinkler systems fitted where required and operating properly — SOLAS 74/78 II-2/52

○ Ventilation systems — SOLAS 74/78 II-2/48

- Main inlets and outlets of all ventilation spaces can be closed from outside ventilated space
- Power ventilation capable of being shutdown from outside ventilated space

○ Fire pumps — SOLAS 74/78 II-2/4

- Fire main activated; water pressure satisfactory (energize forward-most and highest hydrants)

Notes: _____

☐ General safety — COMDTINST 16711.12A, ILO 147

- Safe access to all spaces
- Spaces adequately lighted
- No electrical hazards
- Warning notices posted as necessary

☐ Muster lists and emergency instructions

- Available for each person — SOLAS 74/78 III/8
- Posted in conspicuous places
- Language understood by crew
- Shows crew member duties — SOLAS 74/78 III/53

☐ Safe access to tanker bows — SOLAS 74/78 II-1/3-3
(vessels built prior to 1 JUL 98 not required to comply until 1 JUL 2001)

Structural Integrity

NOTE: *Request records of Outstanding Conditions of Class. (Form or format may vary depending on classification society.) Conditions of Class may identify structural defects, wastage, etc. Conditions may also identify ships overdue for drydocking, repair or other required service.*

☐ Hull structure — ICLL 66 Reg. 1

- Frame pulling away
- Fractures in corners
- Holes in main decks
- Leaks / patching on ballast tanks
- Bulkheads / decks warped
- Excessive wastage

Notes: _____

○ Human Factors — STCW Table A-III

- Oil and oily mixtures — MARPOL Ax. I
  - Responsible officer familiar with handling of sludge and bilge water
  - Quantity of residues generated
  - Capacity of holding tanks
  - Capacity of oil water separator
  - Note any inadequacies in reception facilities used; advise master to report these to flag state
- Garbage — MARPOL Ax. V
  - Note any inadequacies in reception facilities used; advise master to report these to flag state
  - Crew familiar with Annex V requirements

Machinery Spaces:

○ Test communication between navigating bridge and machinery space — SOLAS 74/78 II-1/37

- Two means, one of which must be an engine order telegraph

○ Emergency source of electrical power — SOLAS 74/78 II-1/43, SOLAS 74/78 II-1/44

- Location
- Generator and/or batteries tested under load
- Emergency lighting

○ Main engine / vital auxiliaries (spot-check) — SOLAS 74/78 II-1/27

- F/O pumps / piping
- S/W pumps / piping
- J/W pumps / piping
- L/O pumps / piping
- Piston cooling pumps / piping
- Air compressors / receivers
- Fuel / oil purifiers
- H/O heaters / transfer pump

Notes: _____

◇ GMDSS lifeboat radios (VHF) — SOLAS 74/78 III/6.2

- 3 if over 500 GT
- Operable condition

◇ 9 GHz radar transponder (SART) — SOLAS 74/78 III/6.2, NVIC 9-93

- Vessels > 300 GT and < 500 require 1
- Vessels > 500 GT require 2
- Stowed so to be rapidly placed in survival craft, or stowed in survival craft

◇ Emergency source of power (radio) — SOLAS 74/78 IV/13

- Independent of ship's power system
- 1 or 6 hour time duration
- Battery system
- Battery charger

◇ NAVTEX — SOLAS 74/78 IV/7.1.4

◇ Radio installation — SOLAS 74/78 IV/6.2

- Safe installation
- Independent lighting
- Marked with call sign

Notes: _____

Inert Gas Systems (IGS):

NOTE: *Requirements and guidance on inert gas systems is detailed in 46 CFR 32.53, SOLAS 74/78 II-2/62, and MSM Volume II, Chapter 15.*

○ Type of system installed

Flue gas

Gas generator

Nitrogen bottles

○ Sampling / testing of gas pad

Tank Number	% Oxygen	OR	% Nitrogen
Vessel is gas-free or not carrying cargoes required to be inerted			

○ Proper operation of IGS components

- Blowers
  - Free from excessive bearing noise and vibration
  - Remote shutdown for IGS blower
- Scrubber room ventilation
- Primary and alternate saltwater scrubber pumps
- Deck seal
  - Water level
  - Automatic filling
  - Open drain cocks on IG main
- Remote operated / automatic control valves
  - Open or closed indicator
- Gauges
  - Calibration of inline O_2 analyzing equipment
  - Check O_2 and pressure level recordings
- Portable instruments calibrated
- IG generator
  - Combustion control system and fuel supply
  - Interlocking of soot blowers (IGS automatically shuts down when soot blowers engaged)

Notes: _____

Section 3: General Examination Items

Navigation Safety:

☐ Charts and publications for US waters/ intended voyage — 33 CFR 164.33

- Current and corrected charts
- US Coast Pilot
- Sailing directions
- Coast Guard Light List
- Tide tables
- Tidal current tables
- International Rules of the Road
- Inland Rules of the Road
- International Code of Signals
- Plotting equipment — 33 CFR 164.35

☐ Radar(s) and ARPA — 33 CFR 164.35, 33 CFR 164.37, 33 CFR 164.38

- 2 required if over 10,000 GT
- Operate independently
- ARPA acquires targets

☐ Compasses — 33 CFR 164.35

- Illuminated gyrocompass with repeater at stand
- Illuminated magnetic compass
- Current deviation table

☐ Test electronic depth sounding device and recorder — 33 CFR 164.35

- Accurate readout
- Test all transducers
- Continuous recorder (chart)

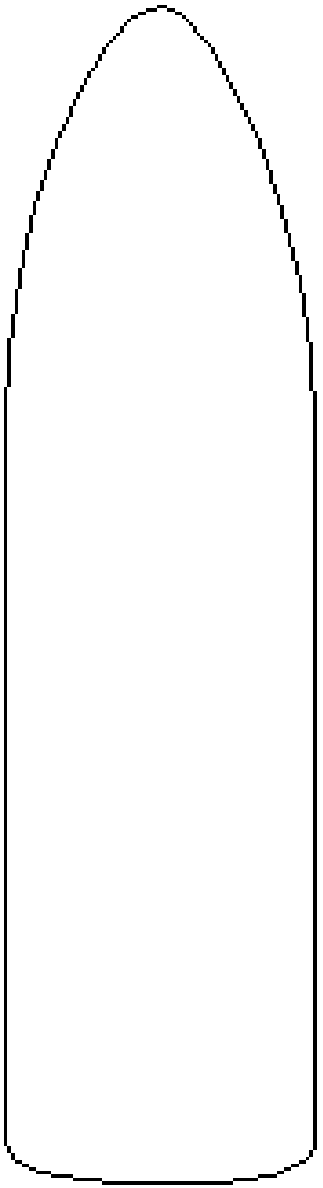
☐ Electronic position fixing device — 33 CFR 164.41

- Location accurate

Notes: _____

Section 8: Appendices

Vessel Layout:



- Double hull / bottom / sides
- Ballast tanks (SBT/CBT)
- Chemical type: I II III
- Tank arrangement
- Deckhouse location
- External / internal framing
- Layout of pumps – type

☐ Bridge log — 33 CFR 164.25; STCW 95 I/14
- Pre-arrival tests conducted
- Casualties (navigation equipment and steering gear failures reported) — 33 CFR 164.53
- Steering gear drills
- Emergency steering drills

☐ Exemptions to SOLAS certificates — SOLAS 74/78 I/4

Pollution Prevention Records:

☐ Current pollution prevention records
- Person-in-charge — 33 CFR 155.700
- Transfer equipment tests and inspections — 33 CFR 156.170
- Declaration of Inspection — 33 CFR 156.150

◇ Oil record book (spot-check) — MARPOL Ax. I/20; 33 CFR 151.25
- Each operation signed by person-in-charge
- Each complete page signed by master
- Book maintained for 3 years

◇ Shipboard oil pollution emergency plan — MARPOL Ax. I/26.1; 33 CFR 151.26
- Approved by flag state / class society
- Contact numbers correct
- Immediate Actions List

◇ Vessel response plan (vessels carrying oil as secondary cargo) — 33 CFR 155.1045; 33 CFR 155.1030

◇ Transfer procedures — 33 CFR 155.720
- Posted / available in crew's language
- List of products carried by vessel
- Description of transfer system including a line diagram of piping
- Number of persons required on duty
- Duties by title of each person
- Means of communication
- Procedures to top off tanks
- Procedures to report oil discharges
- VCS information — 46 CFR 155.750
- Amendments authorized
- Transfer flag and light

Notes: _____

Prohibited Chemical Cargoes:

The following cargoes have been determined to be too hazardous to be carried in U.S. waters:

1. Acrolein
2. Chlorine (on self-propelled vessels)
3. Ethylenimine
4. Hydrofluoric Acid
5. Hydrogen
6. Hydrogen Chloride
7. Hydrogen Fluoride
8. Methylcyclopentadienyl Manganese Tricarbonyl
9. Nitric Acid (in concentrations > 70%)
10. Nitrogen Tetroxide
11. Oxygen
12. Phosphorus Trichloride
13. (Beta) Propiolactone

Name of Certificate	Issuing Agency	ID #	Port Issued	Issue Date	Exp. Date	Endors. Date
International Load Line (ILL) No Change						
International Oil Pollution Prevention w/Form B (IOPP) No Change						
IOPP for NLS Cargoes No Change						
Certificate of Fitness (COF) No Change						
International Tonnage (ITC) No Change						
Safety Management (SMC) No Change						
Document of Compliance (DOC) No Change						
Subchapter O Endorsement (SOE) No Change	USCG					

Nonconforming Vessel. Any vessel failing to comply with one or more applicable requirements of U.S. law or international conventions is a nonconforming vessel. A nonconforming vessel is not necessarily a substandard vessel unless the discrepancies endanger the vessel, persons on board, or present an unreasonable risk to the marine environment.

Substandard Vessel. In general, a vessel is regarded as substandard if the hull, machinery, or equipment, such as lifesaving, firefighting and pollution prevention, are substantially below the standards required by U.S. laws or international conventions, owing to:

- The absence of required principal equipment or arrangement;
- Gross noncompliance of equipment or arrangement with required specifications;
- Substantial deterioration of the vessel structure or its essential equipment;
- Noncompliance with applicable operational and/or manning standards; or
- Clear lack of appropriate certification, or demonstrated lack of competence on the part of the crew.

If these evident factors as a whole or individually endanger the vessel, persons on board, or present an unreasonable risk to the marine environment, the vessel should be regarded as a substandard vessel.

Valid Certificates. A certificate that has been issued directly by a contracting government or party to a convention, or on the behalf of the government or party by a recognized organization, and contains accurate and effective dates, meets the provisions of the relevant convention, and corresponds to the particulars of the vessel and its equipment.

Vessel Information:

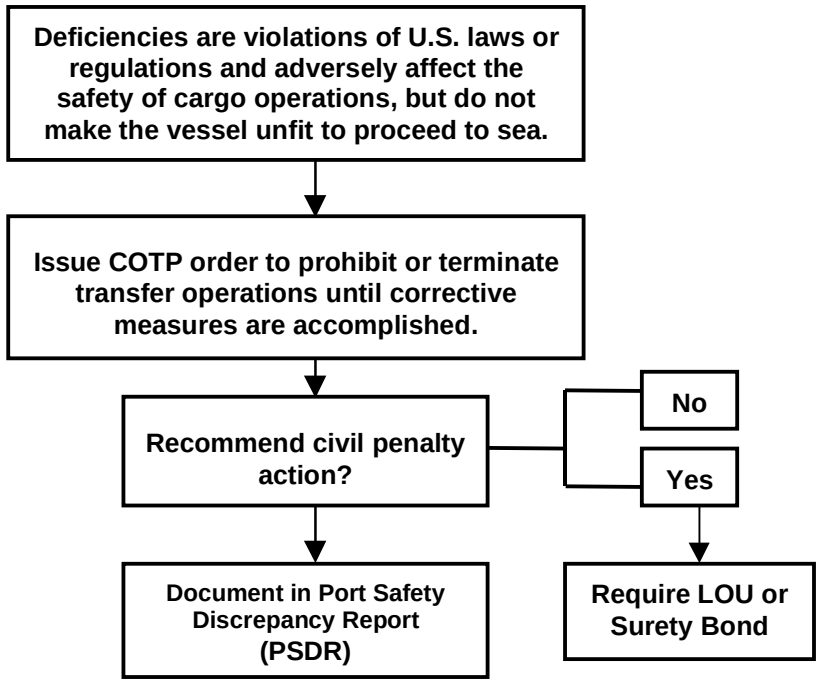
Classification Society		
ISM Issuer: Same as above? Yes No If not the same, which Recognized Organization? _____ ***NOTE:*** *The period of validity for ISM documents should correspond to the following list. If they do NOT, ISM documents should be further investigated.* ☐ *5 years = Full term (SMS and DOC)* ☐ *12 months = Interim (DOC)* ☐ *6 months = Interim (SMC)* ☐ *5 months = Short term (SMC)*		
Last Drydocking Date	Next Drydocking Date	
Location of Last Drydocking		
Date of Last Class Survey		
Outstanding conditions of class or non-conformities		
Last Port of Call	Next Port of Call	
Cargo	Current Operations	
Is pumproom gas-free?	Yes No	N/A
Call Sign		No Change (VFID)
Gross Tons		No Change (VFMD)
Built Date (use delivery date)		No Change (VFCD)
Overall Length (in feet)		No Change (VFMD)

Vessel Description:

Bulk Liquid Carrier	Compress Gas Hazardous Material Carrier
Liquefied Gas Carrier	Other
LNG Carrier	_____

Requiring Corrective Measures Prior to Cargo, Bunkering or Lightering Operations

(NO DETENTION)



Examples include the following:

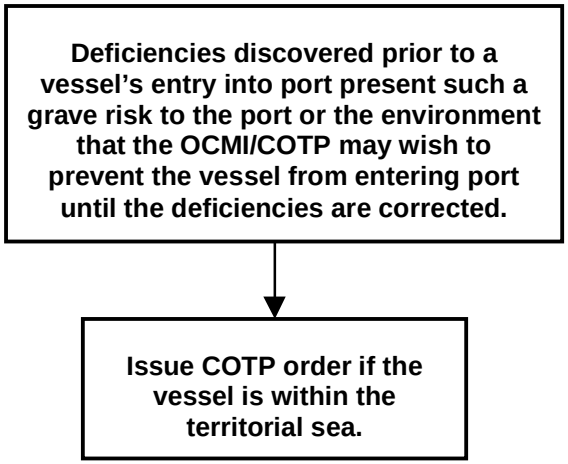
- Oil transfer procedures incomplete.
- Information on properties and hazards of cargoes not on board.
- High and low level alarms inoperative.

Section 1: Administrative Items

IMO Applicability Dates:

Reference	Date
SOLAS 1960	26 MAY 65
SOLAS 1974	25 MAY 80
1978 Protocol to SOLAS 1974	01 MAY 81
1981 Amendments (II-1 & II-2)	01 SEP 84
1983 Amendments (III)	01 JUL 86
Various additional amendments to SOLAS	
MARPOL 73/78 Annex I	02 OCT 83
MARPOL 73/78 Annex II	06 APR 87
MARPOL 73/78 Annex III	01 JUL 92
MARPOL 73/78 Annex V	31 DEC 88
IBC Code	After 01 JUL 86
BCH Code	Prior to 01 JUL 86
IGC Code	After 01 JUL 86
IGC Code (for existing vessels)	Prior to 01 JUL 86
COLREGS 1972	15 JUL 77
Various additional amendments to COLREGS	
Load Line 1966	21 JUL 68
STCW 1978	28 APR 84
1991 Amendments	01 DEC 92
1994 Amendments	01 JAN 96
1995 Amendments	01 FEB 97

Requiring Corrective Measures Prior to Entry



Examples include the following:

- Leaking tanks.
- Carrying dangerous cargoes with expired documents.
- Carrying incompatible cargoes.
- Invalid ISM certificates.
- COFR not on board.

Table of Contents:

(continued next page)

Notes:

Total Time Spent Per Activity:

Regular Personnel (Active Duty)			
ACTIVITY TYPE	ACTIVITY	TRAINING	(PERS) MI

TOTAL ADMIN HOURS	TOTAL TRAVEL HOURS

Reserve Personnel			
ACTIVITY TYPE	ACTIVITY	TRAINING	(PERS) MI

TOTAL ADMIN HOURS	TOTAL TRAVEL HOURS

Auxiliary Resources	
TOTAL BOAT HOURS	TOTAL AIRCRAFT HOURS

Conversions:

Distance and Energy				
Kilowatts (kW)	X	1.341	=	Horsepower (hp)
Feet (ft)	X	3.281	=	Meters (m)
Long Ton (LT)	X	.98421	=	Metric Ton (t)

Liquid (***NOTE:*** *Values are approximate.)*

Liquid	bbl/LT	m^3/t	bbl/m^3	bbl/t
Freshwater	6.40	1.00	6.29	6.29
Saltwater	6.24	.975	6.13	5.98
Heavy Oil	6.77	1.06	6.66	7.06
DFM	6.60	1.19	7.48	8.91
Lube Oil	7.66	1.20	7.54	9.05

Weight

1 Long Ton	=	2240 lbs	1 Metric Ton	=	2204 lbs
1 Short Ton	=	2000 lbs	1 Cubic Foot	=	7.48 gal
1 Barrel (oil)	=	5.61 ft = 42 gal = 6.29 m^3	1 psi	=	.06895 Bar = 2.3106 ft of water

Temperature: Fahrenheit = Celsius (°F = 9/5 °C + 32 and °C = 5/9 (°F – 32))

0	=	-17.8	80	=	26.7	200	=	93.3
32	=	0	90	=	32.2	250	=	121.1
40	=	4.4	100	=	37.8	300	=	148.9
50	=	10.0	110	=	43.3	400	=	204.4
60	=	15.6	120	=	48.9	500	=	260
70	=	21.1	150	=	65.6	1000	=	537.8

Pressure: Bars = Pounds per square inch

1 Bar	=	14.5 psi	5 Bars	=	72.5 psi	9 Bars	=	130.5 psi
2 bars	=	29.0 psi	6 Bars	=	87.0 psi	10 Bars	=	145.0 psi
3 Bars	=	43.5 psi	7 Bars	=	101.5 psi			
4 Bars	=	58.0 psi	8 Bars	=	116.0 psi			